

## ABSTRACT

A system and method for automatic gain control for a wireless transmit and receive unit in a time-slotted communications system includes initializing an automatic gain control loop, sampling a received signal, and estimating the power of the received signal. The estimated power of the received signal is compared with a reference power level and an error signal is generated based upon the difference between the estimated power and the reference power level. The error signals generated by a plurality of received signals are accumulated in an accumulator, and the value of the accumulator is looked up in a table to locate a control word for an attenuator. The control word is then passed to the attenuator to adjust the gain.